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A SUMMARY OF THE WESTERN PINE BEETLE SITUATION IN KLAMATH AND LAKE COUNTIES, OREGON, FOR THE FIVE YEAR PERIOD 1921-1925, INCLUSIVE

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A Summary of the Western Pine Beetle Situation in Klamath and Lake Counties, Oregon for the Five-year Period 1921-1925 inclusive.

December 1, 1925.

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Basis of the data

Since the fall of 1922, four annual beetle surveys have been cooperatively made by the Klamath Forest Protective Association, the U. S. Forest Service and the U. S. Indian Service of that yellow pine timber in private and government ownership in Klamath and Lake Counties, Oregon, situated outside of the boundaries of the southern Oregon-northern California pine beetle control project.

These surveys were made in the late fall of each year by methods approved by the federal Bureau of Entomology. Four such annual surveys have made possible an approximation of the beetle damage in yellow pine for the five years 1921-1925, inclusive. These surveys enable the prompt detection of beetle outbreaks and the carefully watching of the development of these outbreaks on private and government yellow pine alike.

The Area Covered

The annual beetle survey includes all of the yellow pine in Klamath and Lake Counties outside of the boundaries of the southern Oregon-northern California pine beetle control project.

The estimated acreages included in the survey are:

Private acreage	962,000 acres
Government acreage	2,345,000 acres
Total,	3,307,000 acres

Of this total acreage, about 2,500,000 acres are covered by stands of yellow pine of widely varying quality. This yellow pine stand is roughly estimated to be about 18 billion board feet. In many cases, the private and government timber are so closely intermingled that any effective pine beetle control program must simultaneously include the timber in both classes of ownership.

The Beetle Losses

The volume of yellow pine killed on the survey area by beetles for each of the five years for which data are available are as follows:

1921	40 million board feet
1922	41 million board feet
1923	50 million board feet
1924	80 million board feet
1925	60 million board feet

The five-year loss is therefore 271 million board feet. Although this five-year loss when spread over the entire survey area amounts to only one and one-half per cent of the total stand, the fact remains that a large part of the damage is limited to a small part of the survey area. For example, on 100,000 acres of good and poor yellow pine on survey area, the beetle damage during the last five years has equalled nearly ten per cent of the yellow pine stand, or an average of two per cent per year.

These are the so-called epidemic infestations and include both private and government timber. The beetle activity on the rest of the survey area is at present in a fairly low and quiescent condition. Although these epidemics cover less than four per cent of the entire survey area, more than one-third of the entire beetle damage is concentrated on them. On these epidemic areas the beetle losses are equal to one thousand board feet per acre for the five-year period.

The Trend of the Beetle Losses

In 1924 the western pine beetle killed considerably more yellow pine in Klamath and Lake Counties than in any single year during the last ten or fifteen years. One factor which may have contributed to this increased beetle activity is the lowered vitality of the yellow pine trees brought on by a lack of moisture for two or three growing seasons. The 1925 situation is only slightly better than that of 1924 in that the total volumes killed are somewhat less, but it is worse in that the epidemic area of 1925 is larger than it was in 1924.

Certain large stands of yellow pine timber within the survey area have been fairly free of beetle damage for at least ten years and continue to be free. Other bodies of yellow pine, fortunately still limited in extent, appear to be chronically susceptible to heavy beetle damage.

Fires in yellow pine, even light ones, are often followed in the survey area by greatly increased activity of the

beetles. Complete protection from fire is one of the safeguards against the development of beetle epidemics in the yellow pine of Klamath and Lake Counties.

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